

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of processing commands comprising:

receiving a first software image comprising a first command line interface server and a first version of software for a board type, and storing the first command line interface server in a memory~~a first command line interface server~~ and downloading the first version of software to a first set of one or more boards of the board type, wherein the first command line interface server processes~~processing~~ commands addressed to the first set of boards of the~~a first board type~~ programmed with the~~a~~ first version of software;

receiving a second software image comprising a second command line interface server and a second version of software for the board type, and storing the second command line interface server in the memory~~a second command line interface server~~ and downloading the second version of software to a second set of one or more boards of the board type, wherein the second command line interface server processes~~processing~~ commands addressed to the second set of boards of the~~first board type~~ programmed with the~~a~~ second version of software; and

processing a first command using the first command line interface server and a second command using the second command line interface server,

wherein the first command is addressed to the first set of boards of the~~first board type~~ programmed with the first version of software, and the second command is addressed to the second set of boards of the~~first board type~~ programmed with the second version of software, and

wherein (i) processing the first command includes routing the first command to the first set of boards of the~~first board type~~ programmed with the first version of software, (ii) processing the second command includes routing the second command to the second set of boards of the

~~first~~-board type programmed with the second version of software, and (iii) the memory concurrently stores the first command line interface server and the second command line interface server.

2. (Previously presented) The method of claim 1 further comprising routing a single command to multiple boards using the first command line interface server.

3. (Original) The method of claim 1 wherein the first and second commands are CLI commands.

4. (Original) The method of claim 1 further comprising converting the first and second commands from a first protocol to a second protocol.

5. (Original) The method of claim 4 wherein the first protocol is CLI and the second protocol is SNMP.

6. (Withdrawn) A system for downloading a software image, the system comprising:

a plurality of boards, each of the boards having a slot number and a chassis number;

a network management station having an interface, the interface allowing an operator to enter a command, the command having a destination slot number and destination chassis number;

a system manager coupled to the network management station and to the plurality of boards, the system manager storing a plurality of command line interfaces, each of the command line interfaces processing commands addressed to boards having a board type and a version number;

wherein the system manager determines the destination slot number and chassis number of the command, and wherein the command line interface associated with the slot number and the chassis number processes the command;

wherein one of the plurality of boards is updated with a new image and a new command line interface, and wherein, thereafter, a command having a destination of the slot number and chassis number of the board is routed to the new command line interface, and

wherein commands addressed to others of the plurality of boards of the same board type as the one of the plurality of boards are routed to other of the command line interfaces.

7. (Withdrawn) A method for downloading a software image, the method comprising:

receiving a software image, the software image including a first command line interface, the command line interface for processing commands addressed to at least one board, the at least one board having a first board type and a first version number;

storing the first command line interface in memory; and

receiving a command at the first command line interface, the command addressed to the at least one board, processing the command at the first command line interface, and forwarding the command to the at least one board.

8. (Withdrawn) The method of claim 7 further comprising:

receiving a second image having a second command line interface and storing the second command line interface in the memory, the second command line interface for processing commands addressed to boards of the first board type and a second version number; and

thereafter, processing some commands using the first command line interface and other commands using the second command line interface.

9. (Currently amended) A system manager, the system manager comprising:

a first coupling point coupled to a network management station, wherein the system manager receives from the network management station (i) a first software image comprising a first command line interface server and a first version of software for a board type, and (ii) a second software image comprising a second command line interface server and a second version of software for the board type;

a second coupling point coupled to a first set of one or more boards of the board type and to a second set of one or more boards of the board type, wherein the system manager downloads the first version of software to the first set of boards for programming the first set of boards with the first version of software and downloads the second version of software to the second set of boards for programming the second set of boards with the second version of software;

a memory, the memory for concurrently storing the a first command line interface server and the second command line interface server, wherein the first command line interface server processes processing commands addressed to the first set of boards of the a first board type programmed with the a first version of software, and the memory also receiving and storing a second command line interface server, the second command line interface server processes

~~processing commands addressed to the second set of boards of the first-board type programmed with the a second version of software, wherein the memory concurrently stores the first command line interface server and the second command line interface server;~~

a processor coupled to the memory, the processor for directing a first command to the first command line interface server and for directing a second command to the second command line interface server, wherein the first command is addressed to the first set of boards of the first board type programmed with the first version of software, and the second command is addressed to the second set of boards of the first-board type programmed with the second version of software; and

a proxy agent for (i) receiving the first command from the first command line interface server and routing the first command to the first set of one or more boards of the first-board type programmed with the first version of software, and (ii) receiving the second command from the second command line interface server and routing the second command to the second set of one or more boards of the first-board type programmed with the second version of software.

10. (Previously Presented) The system manager of claim 9 wherein the proxy agent receives commands addressed to multiple boards and routes the commands to the multiple boards.

11. (Original) The system manager of claim 9 wherein the commands are CLI commands.

12. (Original) The system manager of claim 9 wherein the commands are converted from a first format to a second format.

13. (Original) The system manager of claim 12 wherein the second format is SNMP.

14. (Currently amended) A system for processing commands comprising:
means for receiving a first software image comprising a first command line interface server and a first version of software for a board type, and storing the first command line interface server in a memory and downloading the first version of software to a first set of one or more boards of the board type, a first command line interface server, wherein the first command line interface server processes processing commands addressed to the first set of boards of the a first-board type programmed with the a-first version of software;

means for receiving a second software image comprising a second command line interface server and a second version of software for the board type, and storing the second command line interface server in the memory and downloading the second version of software to a second set of one or more boards of the board type, a second command line interface server, wherein the second command line interface server processes processing commands addressed to the second set of boards of the first-board type programmed with the a-second version of software; and

means for processing a first command using the first command line interface server and a second command using the second command line interface server, the first command addressed to the first set of boards of the first-board type programmed with the first software version, and

the second command addressed to the second set of boards of the ~~first~~ board type programmed with the second version of software,

wherein (i) processing the first command includes routing the first command to the first set of one or more boards of the ~~first~~ board type programmed with the first version of software, (ii) processing the second command includes routing the second command to the second set of one or more boards of the ~~first~~ board type programmed with the second version of software, and (iii) the memory concurrently stores the first command line interface server and the second command line interface server.

15. (Previously presented) The system of claim 14 further comprising means for routing a single command to multiple boards using the first command line interface server.

16 (Currently amended) A computer program for processing commands comprising:
first code for receiving a first software image comprising a first command line interface server and a first version of software for a board type, and storing the first command line interface server in a memory and downloading the first version of software to a first set of one or more boards of the board type, a first command line interface server, wherein the first command line interface server processes processing commands addressed to the first set of boards of the a first board type programmed with the a first version of software;

second code for receiving a second software image comprising a second command line interface server and a second version of software for the board type, and storing the second command line interface server in the memory and downloading the second version of software to a second set of one or more boards of the board type, a second command line interface server,

wherein the second command line interface server ~~processes~~ ~~processing~~ commands addressed to the second set of boards of the ~~first~~ board type programmed with the ~~a~~ second version of software, wherein the memory concurrently stores the first command line interface server and the second command line interface server;

third code for routing a first command, received at a master session process, to the first command line interface server, and for routing a second command, received at the master session process, to the second command line interface server, the first command being addressed to the first set of boards of the ~~first~~ board type programmed with the first version of software, and the second command being addressed to the second set of boards of the ~~first~~ board type programmed with the second version of software; and

fourth code for processing the first command using the first command line interface server and the second command using the second command line interface server, wherein (i) processing the first command includes routing the first command to the first set of one or more boards of the ~~first~~ board type programmed with the first version of software, and (ii) processing the second command includes routing the second command to the second set of one or more boards of the ~~first~~ board type programmed with the second version of software.

17. (Currently amended) A computer readable medium having stored therein instructions for causing a processing unit to execute the following method:

~~processing commands comprising:~~

receiving a first software image comprising a first command line interface server and a first version of software for a board type, and storing the first command line interface server in a memory and downloading the first version of software to a first set of one or more boards of the

board type, a first command line interface server, wherein the first command line interface server processes processing commands addressed to the first set of boards of the a first-board type programmed with the a-first version of software;

receiving a second software image comprising a second command line interface server and a second version of software for the board type, and storing the second command line interface server in the memory and downloading the second version of software to a second set of one or more boards of the board type, a second command line interface server, wherein the second command line interface server processes processing commands addressed to the second set of boards of the first-board type programmed with the a-second version of software; and

processing a first command using the first command line interface server and a second command using the second command line interface server, the first command addressed to the first set of boards of the first-board type programmed with the first version of software, and the second command addressed to the second set of boards of the first-board type programmed with the second version of software

wherein (i) processing the first command includes routing the first command to the first set of one or more boards of the first-board type programmed with the first version of software, (ii) processing the second command includes routing the second command to the second set of one or more boards of the first-board type programmed with the second version of software, and (iii) the memory concurrently stores the first command line interface server and the second command line interface server.

18. (Currently amended) A method of processing commands comprising:

receiving a first software image comprising a first command line interface server and a first version of software for a board type, and storing the first command line interface server in a memory and downloading the first version of software to a first set of one or more boards of the board type, a first command line interface server, wherein the first command line interface server processes processing commands addressed to the second set of boards of the a first-board type programmed with the a first version of software;

receiving a second software image comprising a second command line interface server and a second version of software for the board type, and storing the second command line interface server in the memory and downloading the second version of software to a second set of one or more boards of the board type, a second command line interface server, wherein the second command line interface server processes processing commands addressed to the second set of boards of the first-board type programmed with the a-second version of software;

processing a first command using the first command line interface server and a second command using the second command line interface server, the first command addressed to the first set of boards of the first-board type programmed with the first version of software, and the second command addressed to the second set of boards of the first-board type programmed with the second version of software; and

receiving, at the first command line interface server, a response from each of the boards of the first type having the first software version, and responsively forwarding each response to a master command line interface server, wherein the master command line interface server responsively sends a user response,

wherein (i) processing the first command involves routing the first command to the first set of boards of the ~~first~~ board type programmed with the first version of software, (ii) processing the second command involves routing the second command to the second set of boards of the ~~first~~ board type programmed with the second version of software, and (iii) the memory concurrently stores the first command line interface server and the second command line interface server.

19. (Previously presented) The system manager of claim 9, wherein the processor is arranged to include a command line interface server master session, wherein the command line interface server master session receives the first command and the second command from a client device, and wherein the command line interface master session directs (i) the first command to the first command line interface server, and (ii) the second command to the second command line interface server.

20. (Previously presented) The method of claim 18, further comprising routing a single command to multiple boards using the first command line interface server.

21. (Previously presented) The method of claim 18, wherein the first and second commands are CLI commands.

22. (Previously presented) The method of claim 18, further comprising converting the first and second commands from a first protocol to a second protocol.

23. (Previously presented) The method of claim 22, wherein the first protocol is CLI and the second protocol is SNMP.